

INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

This material contains information affecting the National Defense of the United States within the meaning of the espionage laws, Title 18, U.S.C. Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

CONFIDENTIAL
NO FOREIGN DISSEM

COUNTRY Yugoslavia
SUBJECT Yugoslav Experiments with Single-Sideband Radio Communications
REPORT
DATE DISTR. 16 NOV 1962
NO. PAGES 1
REFERENCES RD
50X1-HUM

DATE OF INFO.
PLACE & DATE ACQ.
50X1-HUM

THIS IS UNEVALUATED INFORMATION ENTATIVE.

it was reported that the Yugoslavs have been experimenting with an application of the use of the suppressed-carrier, single-sideband system of radio communications. The experiment involved utilizing the carrier that was suppressed in the channel in which the communications was taking place as a transmitting or receiving agent on another frequency, simultaneously and without mutual interference.¹

50X1-HUM

Comment: Although the system presents certain technical advantages, it appears that it is very vulnerable; jamming the carrier which is common to an entire network of stations would put the net virtually out of service.

50X1-HUM

50X1-HUM

CONFIDENTIAL
NO FOREIGN DISSEM

GROUP 1
Excluded from automatic
downgrading and
declassification

STATE	X	ARMY	X	NAVY	X	AIR	X	NSA	X	OCR	X	DIA	X		
(Note: Washington distribution indicated by "X"; Field distribution by "#".)															

INFORMATION REPORT INFORMATION REPORT

1600

CONFIDENTIAL

[REDACTED]

50X1-HUM

SUBJ: Single Sideband Military Radio Communications

50X1-HUM

1. It is known that the use of the system of single side band telecommunications with the carrier suppressed (SSB) is becoming more and more widespread in the military field both West and East. The use of this technique is obviously tied to the perfection of the equipment and to the professional training of the personnel assigned to operate it. For military use "in the field" it is obviously necessary that the operations of "syntonization" be completely automatic; this requires the use of "channels" or "prefixed frequencies".

2. The Yugoslavs have experimented with a simplification of the method; it involves, actually, an apparent SSB. The carrier, that is suppressed in the channel in which the communications takes place, is in reality transmitting on receiving on another frequency and thereby permits the system to function as if it were of normal ~~modulation~~ amplitude modulation (AM).

3. In effect one sole carrier services, simultaneously and without causing mutual interference, various communications channels. This is arranged in such a way that the local oscillator of the receiver, syntonized on preselected channels, serves also to receive, on another "frequency medium", the signal related to the carrier, which is thereupon reinserted before the demodulation and with the proper phase.

50X1-HUM

The system presents indubitably technical advantages and lowers considerably the qualifications required for the single apparatus. It is, however, very vulnerable; jamming of the carrier, common to an entire network of stations, would put it virtually out of service. The application is, however, technically interesting.

50X1-HUM

50X1-HUM

50X1-HUM

Page Denied